

FIG. 1

Input		Input										Total	
Unit	Admitting	ED	2C	2D	3D	5A	5B	6D	CICU	CVICU	MICU	Med-Surg	Total
Total													
Admitting													
ED													
2C													
2D													
3D													
5A													
5B													
6D													
CICU													
CVICU													
MICU													
Med-Surg													
OR													
Cath Lab													
Other													

FIG. 3A

Unit	Beds	Monitors			Patients (census)	Occu- pancy	ALOS	Patient: Nurse Ratio	Hourly Cost	Average Overtime per Day	# of Monitor ing Techs	Transports per Day	Primary Diagnoses
		Hardwire	Portable	Telemetry									
Total	0	0	0	0									
Admitting													
ED													
2C													
2D													
3D													
5A													
5B													
6D													
CICU													
CVICU													
MICU													
Med-Surg													
Unit	Rooms				Cases		Average Case Time	Staff per Room	Hourly Cost	Average Overtime		Backlog	Primary Diagnoses
OR													
Cath Lab													
Other													

FIG. 3C

Initial Assessment

Hospital Name	Phone Number
Date	Fax Number
Contact	e-mail
	Web site

What is organization's vision/key issues for next five years? _____

number of acute care beds	_____
Average daily census	_____
Occupancy	_____
Seasonal or other fluctuations?	_____

Annual ER Visits _____

% of ER Visits Admitted _____

Do you have ER diversions? _____
If yes how often (days per year) _____

Prolonged wait for beds? _____

Do you experience patient flow bottlenecks? _____

ER	ICU
OR	Telemetry Units
Cath Lab	Other Areas

Do you perform internal transfers to provide short term monitoring?

Oncology	Surgical	_____
Neurology	Stroke unit	_____
Obstetrics	Medical	_____
Orthopedics	Other	_____

Existing Monitoring	Number	Occu pancy	Plans to Replace
Monitored beds			
Telemetry beds			

RN labor costs per hour _____ Direct or burdened? _____

Do you use monitoring techs? _____ If yes, Cost per
how many _____ hour _____

Do you have other monitoring related problems? _____

FIG. 3D

Hospital Profile

Hospital Name _____

Number of Acute Care Beds _____

Number of Discharges _____

Number of ED Visits _____

Average Daily Census _____

Inpatient (Facility) Days _____

Average LOS _____

Occupancy _____

Medicare Case-Mix Index _____

% Medicare Patients _____

% Medicare Days _____

% Medicaid Patients _____

% Medicaid Days _____

% ED Visits Admitted _____

% of Admissions from ED _____

Average hourly direct nursing cost _____ Burden Rate _____

Average hourly direct monitoring tech _____

Operating Revenue _____

Total Expenses _____

Operating Income _____

Operating Margin _____

Net Price Per Discharge _____

Net Cost Per Discharge _____

Emergency Room Visit Charge _____

FIG. 3E

Hospital Profile

ER Hourly Cost _____

FTE's Per Bed _____

Emergency Department Diversions _____

Open heart surgery? _____

Trauma Center _____

Top Five DRG's

Name	DRG#	Avg LOS	Avg Cost
Others			

Key Benchmark Hospitals

FIG. 3F

Other Data

Emergency Department diversions

How many days per year on diversion

Average visits per year

Estimated visits lost

Average ED revenue per visit

Estimated ED revenues lost

Percent of ED patients admitted

estimated admissions lost

Average Net Revenue per Admission

Estimated lost in patient revenue

Unnecessary internal patient transfers

Total (or per patient admission) Transfers for monitoring only

Estimated cost per transfer

Nursing

Housekeeping

Transport

Other

Estimated reduction with "flex-bed/unit"

Estimated cost savings eliminating transfers

Costly or unmonitored patient transports

Total nurse accompanied transports per day

How many could be eliminated with central transport monitoring

What is average nursing time per transport?

Monitoring technicians

Total number currently

Labor cost per hour

FIG. 3G

Other Data

Estimated Efficiency of ICU/CCU

Total ICU Beds
Average Daily ICU Census
Total ICU Days
Average ICU LOS
ICU Days for Monitoring Only (Class I/II)
ICU Days waiting discharge
Average nurse to patient ratio

Estimated Efficiency of Intermediate Care/Step-Down Units

Total Monitored Beds
 Portable/Hardwired
 Telemetry
Average Daily Unit Census
Total Unit Days
Average Unit LOS
Average Nurse to patient ratio

Patient flow bottlenecks

ICU/CCU and Intermediate Care Unit
 Use data above

ED

Average wait for admission/monitored bed
Peak wait for admission/monitored bed
How frequently?

Post Surgery

Average unnecessary wait time to transfer back to unit
Cancelled cases
Staff overtime

Post Interventional Cath

Average unnecessary wait time to transfer back to unit
Cancelled cases
Staff overtime

Other areas with patient flow bottlenecks

FIG. 3H

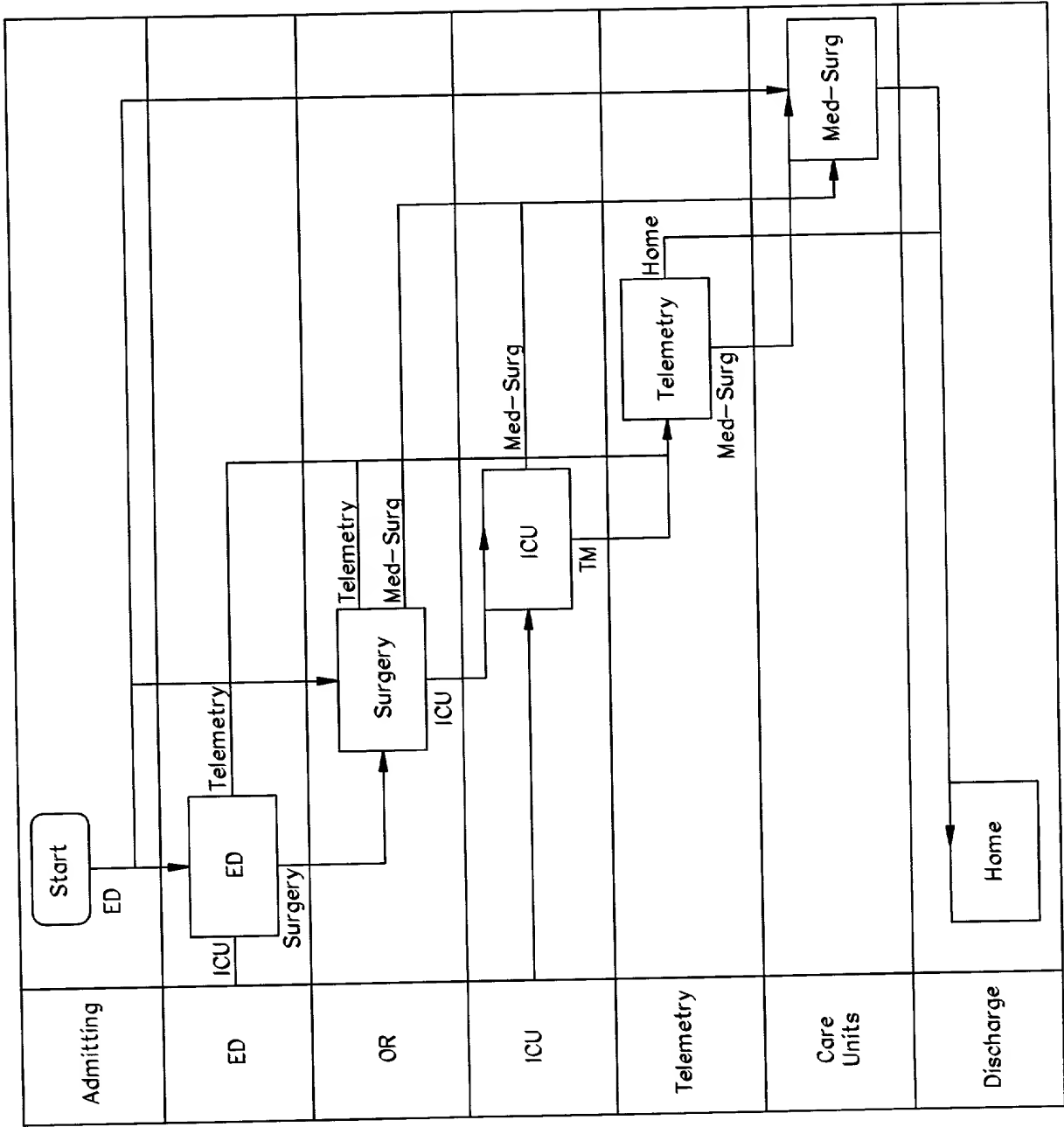


FIG. 4

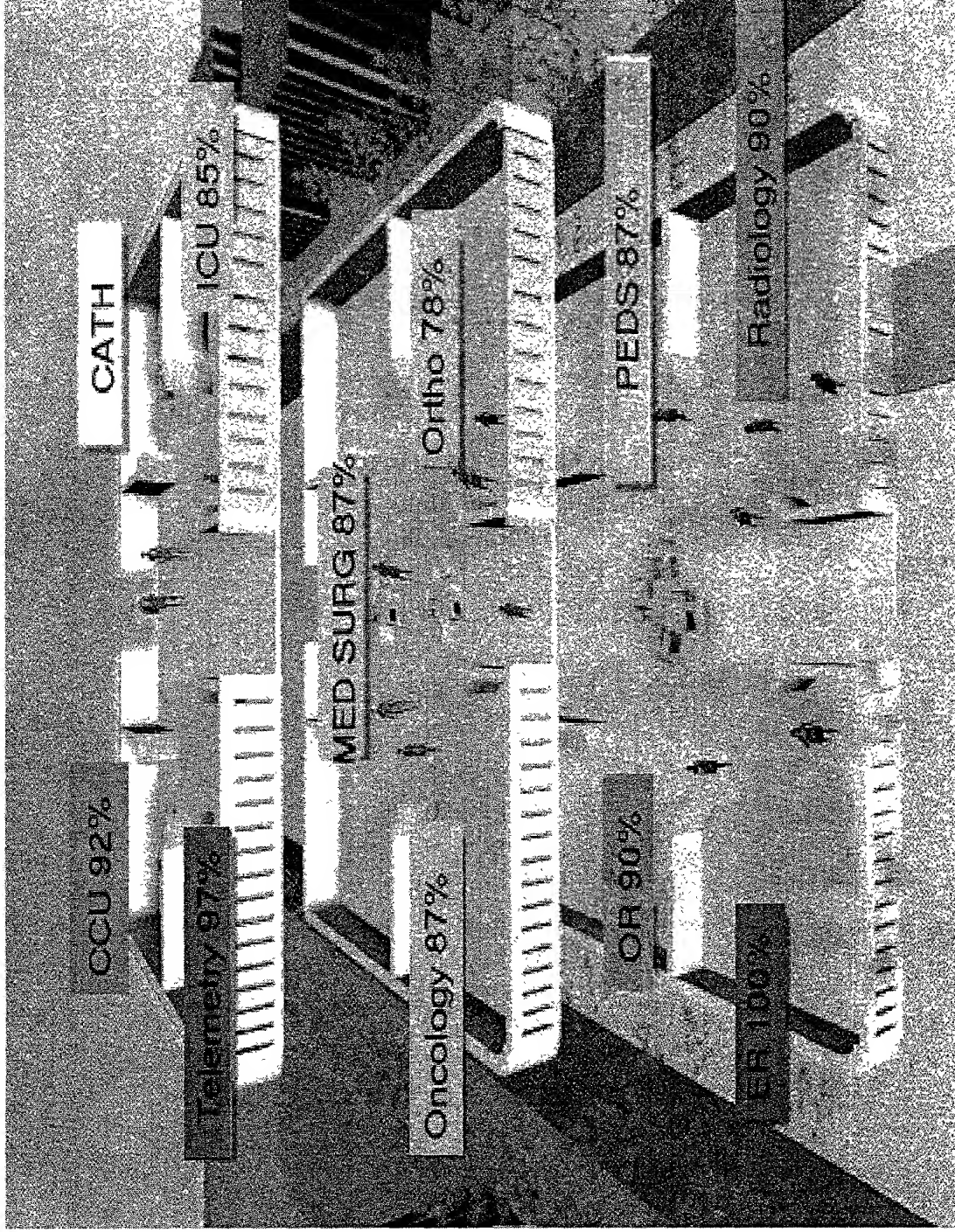
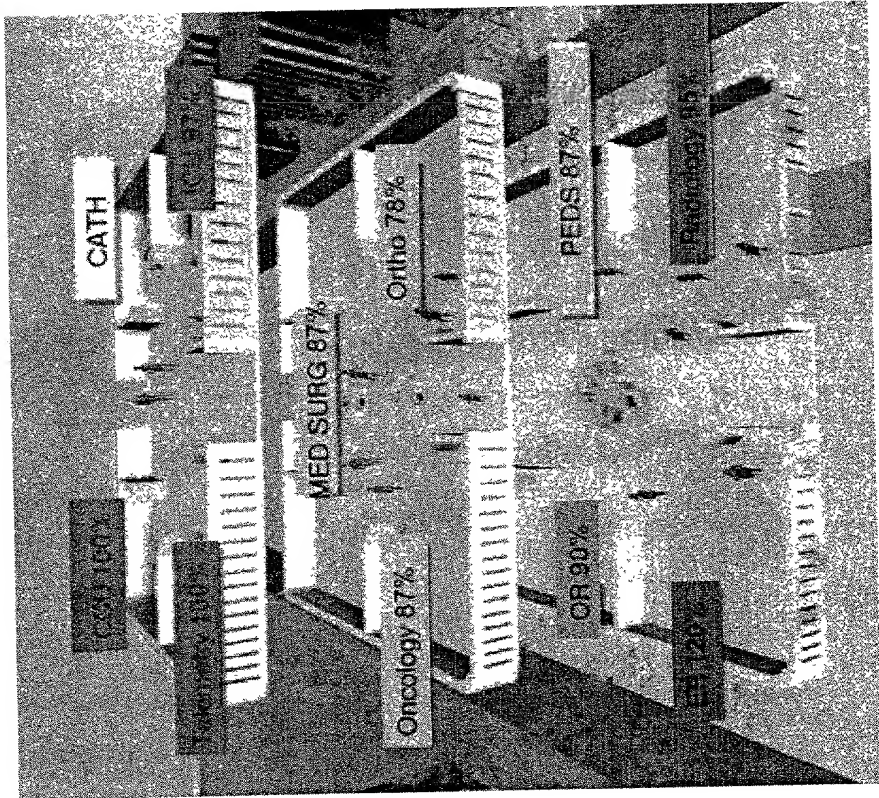
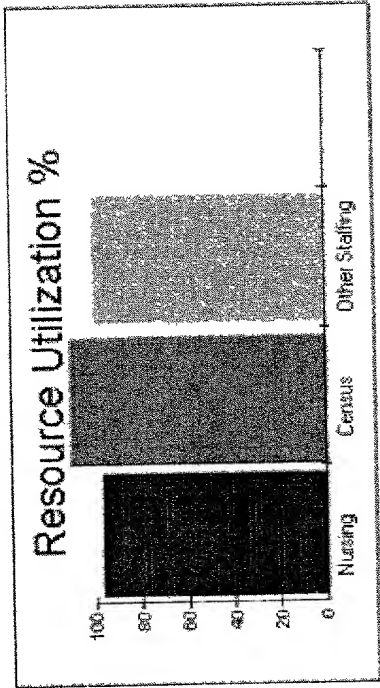


FIG. 5



Emergency Room
Current Time 11:10 AM
Last 8 Hr. Summary



Resource Statistics

	Count	Avg QOS	Avg Idle	Avg Res Wait
Nursing	10	0.92	0.24	0.14
Staffing	4	0.92	0.03	0.00

Average ER LOS 32

Average Chest Pain LOS 6.5

Number of Patient > 24Hrs. 3
Wait times
26Hrs
32Hrs
44Hrs

FIG. 6

DEPT	CENSUS	OVERFLOW STATUS	WAIT TIME
ER	120	Current +20% Projected >40%	2+
TELE	100	Currently Saturated suggest 15% turn 4hrs	3+
ICU	97	App. Sat	1+
MED. SURG.	87	Suggest bed utilization for tele pat	N/A
ONCOLOGY	87	N/A	N/A
Ortho.	78	N/A	N/A
Radiology	96	N/A	N/A
PEDS.	87	N/A	N/A
CATH	100		N/A

Patient Monitoring Census Report

Last 8 Hours Activity
Top 10% Recommend Discharge

Patient Name	Patient ID	Unit	Diagnosis	AGE	Class	Overall LOS	Monitor LOS(Cur.)	AVG. HR.	MIN. HR.
Johnson, Fred	133567789	4W	ROMI	72	II	4.7	2.4	88	74
Bartell, Marv	124359671	4E	Pneumonia	67	II	5.2	3.6	110	81
Sanchez, Jason	33478990	4W	Cardiac Bypa	44	I	6.3	4.2	96	71

Total Beats	Vert. %	Supra-Vert. %	Paced %	Pairs	Total Runs	Beats In Runs	ST Level
52,381	8	0	0	4	0	NA	1
64,521	1	0	0	0	0	NA	0
55,476	6	0	0	12	0	NA	1

Total Transactions that
Waited at Resource Queue

Bed	0
OR	0
SICU	36
NW7	0
ED	0
MICU	1
CSICU	164
CMICU	0
Burn	0
Trauma	0
Neuro	7
WW4	203
IMC	6
NW8	191
NW9	7
Rental	0
Cath	0
Worker	

Resource Statistics – Hours

	#Trans	Tot. Wait#	Avg. Wait#	Max. Wait#	Avg. Wait#	Wait	Avg.	NZ	Wait	Tot. Wait
Bed	2438	0	0	0	0.00	0.00		0.00	0.00	0.00
OR	2413	0	0	0	0.00	0.00		0.00	0.00	0.00
SICU	183	36	1	2	1.40	7.11	256.13			
NW7	602	0	0	0	0.00	0.00	0.00			0.00
ED	1546	0	0	0	0.00	0.00	0.00			0.00
MICU	205	1	1	1	<0.01	0.28	0.26			
CSICU	287	164	2	4	4.61	8.06	1322.62			
CMICU	90	0	0	0	0.00	0.00	0.00			0.00
Burn	34	0	0	0	0.00	0.00	0.00			0.00
Trauma	141	0	0	0	0.00	0.00	0.00			0.00
Neuro	131	7	1	1	0.42	7.94	55.60			
WW4	1020	203	2	6	0.78	3.90	791.39			
IMC	355	6	2	3	0.08	4.94	29.66			
NW8	990	191	2	5	0.43	2.23	425.82			
NW9	903	7	1	2	0.02	2.46	17.20			
Rental	301	0	0	0	0.00	0.00	0.00			0.00
Cath	450	0	0	0	0.00	0.00	0.00			0.00
Worker										

FIG. 8A

	#Trans	Max Cap Used	Tot #Wait	Avg #Wait	Max #Wait
Discharge - Home	6104	1	0	0	0
Admitting - Start	5964	1	0	0	0
OR - Surgery	2412	12	0	0	0
Care Units - Med-Surg	2334	130	0	0	0
ED - ED	1545	8	0	0	0
Telemetry - WW4 Cardia	1000	29	203	2	6
Telemetry - NW8	955	43	191	2	5
Telemetry - NW9	872	40	7	1	2
Telemetry - NW7	576	33	0	0	0
OR - Cath Lab	450	2	0	0	0
Telemetry - IMC	339	23	6	2	3
Telemetry - 3 Rental	286	21	0	0	0
ICU - CSICU	279	12	164	2	4
ICU - MICU	197	13	1	1	1
ICU - SICU	174	10	36	1	2
ICU - Trauma ICU	133	12	0	0	0
ICU - Neuro ICU	126	9	7	1	1
ICU - CMICU	87	5	0	0	0
ICU - Burn ICU	31	5	0	0	0

Tot #Res Wait	Tot #Block	Tot Res Wait	Tot Block	Tot Inact	Avg. Res Wait	Avg. Block	Avg. Inact
0	0	0.00	0.00	0.00	0.00	0.00	0.00
0	0	0.00	0.00	0.00	0.00	0.00	0.00
0	0	0.00	0.00	0.00	0.00	0.00	0.00
0	0	0.00	0.00	0.00	0.00	0.00	0.00
0	0	0.00	0.00	0.00	0.00	0.00	0.00
203	0	31.46	0.00	0.00	0.03	0.00	0.00
191	0	17.73	0.00	0.00	0.02	0.00	0.00
7	0	0.72	0.00	0.00	<0.01	0.00	0.00
0	0	0.00	0.00	0.00	0.00	0.00	0.00
0	0	0.00	0.00	0.00	0.00	0.00	0.00
6	0	1.23	0.00	0.00	<0.01	0.00	0.00
0	0	0.00	0.00	0.00	0.00	0.00	0.00
164	0	53.75	0.00	0.00	0.19	0.00	0.00
1	0	0.01	0.00	0.00	<0.01	0.00	0.00
36	0	9.58	0.00	0.00	0.06	0.00	0.00
0	0	0.00	0.00	0.00	0.00	0.00	0.00
7	0	2.32	0.00	0.00	0.02	0.00	0.00
0	0	0.00	0.00	0.00	0.00	0.00	0.00
0	0	0.00	0.00	0.00	0.00	0.00	0.00

FIG. 8C

Transaction Statistics

#Trans	Avg Cost	Avg VA Cost	Avg BVA Cost	Avg NVA Cost	Avg Lbr Cost	Avg Eq Cost	Avg Oth Cost	Avg OT Cost
21669	\$3060.79	\$3060.79	\$0.00	\$0.00	\$0.00	\$0.00	\$3060.79	\$0.00

Activity Statistics

	Tot Cost	Tot VA Cost	Tot BVA Cost	Tot NVA Cost	Tot Lbr Cost	Tot Eq Cost	Tot Oth Cost	Tot OT Cost
Admitting	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Care Units	\$34276032.83	\$34276032.83	\$0.00	\$0.00	\$0.00	\$0.00	\$34276032.83	\$0.00
Discharge	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
ED	\$690600.02	\$690600.02	\$0.00	\$0.00	\$0.00	\$0.00	\$690600.02	\$0.00
ICU	\$18792000.46	\$18792000.46	\$0.00	\$0.00	\$0.00	\$0.00	\$18792000.46	\$0.00
OR	\$2753400.07	\$2753400.07	\$0.00	\$0.00	\$0.00	\$0.00	\$2753400.07	\$0.00
Telemetry	\$10962000.27	\$10962000.27	\$0.00	\$0.00	\$0.00	\$0.00	\$10962000.27	\$0.00

FIG. 9A

Resource Statistics

	Tot Cost	Tot OT Cost	Tot Busy Cost	Tot Use Cost	Count	Avg Cost	Avg OT Cost	Avg Use Cost
Worker	\$0.00	\$0.00	\$0.00	\$0.00	1	\$0.00	\$0.00	\$0.00
Bed	\$45360001.10	\$0.00	\$35080574.35	\$0.00	500	\$90720.00	\$0.00	\$0.00
OR	\$8640000.21	\$0.00	\$2755400.07	\$0.00	20	\$432000.01	\$0.00	\$0.00
ICU	\$20736000.50	\$0.00	\$19005000.46	\$0.00	64	\$324000.01	\$0.00	\$0.00
Telemetry	\$12096000.29	\$0.00	\$11086250.27	\$0.00	64	\$189000.00	\$0.00	\$0.00
ED	\$7776000.19	\$0.00	\$690925.02	\$0.00	36	\$216000.01	\$0.00	\$0.00

FIG. 9C

Resource Utilization %

Worker	0.00
Bed	77.34
OR	31.89
ICU	91.65
Telemetry	91.65
ED	8.89

Resource Statistics – Days

	Count	Avg Busy	Avg OOS	Avg Idle	Avg Res Wait	Avg OT
Worker	1	0.00	0.00	90.00	0.00	0.00
Bed	500	69.60	0.00	20.40	0.00	0.00
OR	20	28.70	0.00	61.30	0.00	0.00
ICU	64	82.49	0.00	7.51	0.00	0.00
Telemetry	64	82.49	0.00	7.51	0.00	0.00
ED	36	8.0	0.00	82.00	0.00	0.00

Resource Statistics – Days Worker

	Count	Avg Busy	Avg OOS	Avg Idle	Avg Res Wait	Avg OT
Admitting	1	0.00	0.00	90.00	0.00	0.00
Care Units	0	0.00	0.00	0.00	0.00	0.00
Discharge	0	0.00	0.00	0.00	0.00	0.00
ED	0	0.00	0.00	0.00	0.00	0.00
ICU	0	0.00	0.00	0.00	0.00	0.00
OR	0	0.00	0.00	0.00	0.00	0.00
Telemetry	0	0.00	0.00	0.00	0.00	0.00

FIG. 10A

Activity Statistics

	Tot Cost	Tot Lbr Cost	Tot Eq Cost	Tot Oth Cost	Tot OT Cost
Care Units - Med-Surg	\$34276032.83	\$0.00	\$0.00	\$34276032.83	\$0.00
ICU - ICU	\$18792000.46	\$0.00	\$0.00	\$18792000.46	\$0.00
Telemetry - Telemetry	\$10962000.27	\$0.00	\$0.00	\$10962000.27	\$0.00
OR - Surgery	\$2753400.07	\$0.00	\$0.00	\$2753400.07	\$0.00
ED - ED	\$690600.02	\$0.00	\$0.00	\$690600.02	\$0.00
Admitting - Vitalcom Confidential and Proprietary					
Discharge - Home	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Admitting - Start	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00

FIG. 10B

Benchmarking	Client	Peer #1	Peer #2	Peer #2	Peer Average*	National Average*	Variance to peers	Variance to National
Acute care beds	1	1				375	-63%	-100%
ALOS	1				2.666667	4.9	-100%	-79%
Occupancy	1					61.4%		63%
Case Mix Index	0					1.5651		-100%
Operating Margin	1					4.4%		2173%
Cost Per discharge	0							
ED Visits	23							
% Outpatient \$						29.4%		-100%
FTE Bed	23							
Top Five DRG's								
	23							
ALOS	23							
Average Cost	56							
	6							
ALOS	7							
Average Cost	1							
	3							
ALOS	2							
Average Cost	0							
	9							
ALOS	4							
Average Cost	5							
	6							
ALOS	7							
Average Cost	8							
Composite								
ALOS	8.6							
Average Cost	14							

* All hospitals with 250 beds or more

FIG. 11

TABLE 1

	3600	Emergency 34.0%	Surgery/C 24.0%	Med-Surg 24.0%	ICU 10.0%	TM 8.0%
Patients						
Start		0.083333	0.125	4	3.25	3.75
ALOS		1224	864	864	360	288
Patients	3600	13.6	9.6	9.6	4.0	3.2
Patients per day	40.0	102	108	3456	1170	1080
Total Days	5706		0.25	0.3	0.15	0.3
From Emergency			306		183.6	367.2
Patients	856.8		38.25		596.7	1377
Total Days	2011.95				0.3	0.4
From Surgery				0.3	351	468
Patients	1170			1404	1140.75	1755
Total Days	4299.75			0.2		0.8
From ICU				178.92		715.68
Patients	894.6			715.68		2683.8
Total Days	3399.48			0.2		
From TM				310.176		
Patients	1781.28			1240.704		
Total Days	1240.704					
From Med-Surg						
Patients	1704.096					
Total Days		1224	1170	1704.096	894.6	1838.88
Total Patients	6831.576					
Total Patient Da	16657.884					
ALOS	5.2462472					
Transfer/Patient	2.151542					
Without Surg/ED	1.3975737					
Percent still in						
hospital at 90 days	0.0582916					
Patients	185.0876					

FIG. 12